

HIV Pre-Exposure Prophylaxis (PrEP) among men who have sex with men: peer communication, engagement and social networks

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Abstract *HIV Pre-Exposure Prophylaxis (PrEP) has renewed optimism in controlling the HIV epidemic, despite its continued growth among men who have sex with men (MSM). The popularity of dating-sexual dating apps and digital media platforms in exchanging information and experiences about PrEP on peer social networks is recognized. However, studies on contexts, motivations, and scope in HIV prevention are scarce. The article aims to understand the dynamics of virtual and face-to-face peer networks among MSM for the decision to use PrEP, its disclosure, and publicity. Qualitative study using semi-structured interviews with 48 PrEP users from five Brazilian cities. Most interviewees share information and experiences about PrEP in peer social networks. However, its publication reveals tensions arising from the permanence of stigmas associated with homosexuality and HIV. The protagonism in exposing the use of PrEP expresses commitment to attracting new users. The relevance of peer social networks in sharing experiences and information about PrEP has the potential to diversify the target audience and expand and democratize PrEP coverage in the country.*

Key words *Social networking, Online social networking, Sexual and gender minorities, Pre-Exposure Prophylaxis, HIV*

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Introduction

New HIV prevention biotechnologies, including pre-exposure prophylaxis (PrEP), which consists of taking antiretroviral (ARV) drugs before potential exposure to HIV, have sparked renewed optimism in the global response to the HIV epidemic¹. Studies have confirmed the safety and efficacy of different types of PrEP among men who have sex with men (MSM), including daily use^{2,3}, on-demand⁴, and injectable PrEP⁵. Despite the UNAIDS recommendation of 50% coverage for MSM and transgender people at very high risk of acquiring HIV⁶, the epidemic is growing among younger men in various parts of the world, including Brazil.

Official data in Brazil from the last decade reveal that young educated brown or black people aged between 20 and 34 years account for most of infection notifications. A study conducted in 2016 with MSM living in 12 Brazilian cities⁷ estimated that HIV prevalence was up to 18% in this group. Only daily oral PrEP is made available on the country's national health service, the *Sistema Único de Saúde* (SUS) or Unified Health System. Official data⁸ show that 57,597 people started PrEP between January 2018 and February 2022. Most were non-black (57.7%), aged between 30 and 39 years (42%) and had ≥ 12 years of schooling (72%), revealing disparities between those who access treatment and those who are actually most vulnerable to HIV.

New generations, especially among sexual minorities, have updated the strategies they use to find a partner, increasingly using dating apps^{9,10}. Major social media platforms, such as Facebook, Instagram and Twitter, have also established themselves as valuable tools for finding new partners, providing a unique environment for social interaction, sociation, and sociability¹¹ among people in affective-sexual relationships and geographically close and distant friends. In addition, dating apps and online platforms are growing tools for promoting political mobilization by sharing of information and experience of HIV/AIDS, especially among young people¹².

Research shows that HIV prevention is a frequent theme in online and face-to-face social networks of gay men and other MSM^{13,14}. However, studies investigating the circulation of information that influences the decision to use PrEP and the potential impacts of the socialization of PrEP usage in these networks are scarce. Understanding these phenomena is therefore essential for developing effective HIV prevention policies¹⁵.

In view of this, the aim of this study was to understand how information that may influence the decision to use PrEP is shared in peer social networks, the reasons for sharing such information, and the promotion of prophylaxis in these networks and its effects.

Methodology

We used data from the qualitative component of the "Combine!" study (*Estudo Combina! - EC*), developed to demonstrate the effectiveness of PrEP and combination HIV prevention. The study was undertaken in different types of public health services in five Brazilian cities: two HIV clinics (Ribeirão Preto-SP and Porto Alegre-RS), two testing and counseling centers (São Paulo-SP and Curitiba-PR), and one hospital for infectious diseases (Fortaleza-CE)¹⁶.

The study focused on the following types of PrEP: daily oral PrEP, taken by HIV-uninfected people aged ≥ 16 years who reported having unprotected sex in the last six months or vulnerable groups (including prostitutes and people in violent relationships and/or relationships involving drug use); and PrEP on-demand, offered exclusively to MSM and transgender women and self-identified transvestites.

In this article, we analyze 48 semi-structured interviews with 18 daily PrEP users undergoing follow-up in the service in São Paulo and 30 PrEP on-demand users in all the services. The sample included people who had been using PrEP for ≥ 1 month from a diverse range of backgrounds, considering the following sociodemographic characteristics: race/color, level of education, socioeconomic status (income, occupation, and place of residence), and sexual-affective partners (casual, stable), and sex work. We also invited all users undergoing regular PrEP follow-up who self-identified as cisgender men who have sex with other men.

The analysis uses data from two interview guides devised to collect information about the interviewees' sexual trajectories and sexual partners, knowledge of PrEP, the reasons for using PrEP and related feelings and meanings, knowledge sharing, and experiences of interacting with peer social networks.

All participants signed an informed consent form. The daily PrEP users were interviewed face-to-face in the health service, while the on-demand users were interviewed online using a video conferencing platform due to the onset of the

COVID-19 pandemic. The interviews were recorded, transcribed and revised, and the content was categorized into themes using QSR NVivo® 12. The final number of interviews was determined using the theoretical saturation method¹⁷. Fictional names were used to ensure participant anonymity.

Content analysis was performed using the meaning interpretation method¹⁸, drawing on the principles of intersectionality. We interpreted the context, reasons and logic behind the interviewees' comments, actions, and interrelations, as well as the effects of interactions between social markers of difference (race, sexual orientation, generation, etc.) and oppressive structures (racism, homophobia, etc.) have on the themes. The process was carried out in three stages: (a) in-depth reading of the interview content to capture the overall picture and particularities of the accounts; (b) definition of emerging empirical categories and categorization of accounts; (c) development of a preliminary synthesis with intersectional analytical sensitivity; (d) review of the scientific literature and discussion of the findings of the preliminary synthesis; (e) elaboration of a final interpretive synthesis.

All stages of the study were approved by the University of São Paulo Medical School's research ethics committee (Codes 2.131.668 and 3.402.293).

Results

The interviewees were aged between 18 and 56 years (average age 29 years). Most of the interviewees were white (27), self-identified as gay, homosexual or MSM (39), and single (38). Half of the sample (24) reported that they were atheists or agnostics, had completed at least secondary education and had a monthly income of more than R\$ 3,000. Three had worked as a sex workers and 17 lived with family members. Twelve had been using PrEP for between one and two years at the time of the interview, 17 between six months and one year, seven between three and six months, and 12 for up to three months. The sociodemographic characteristics of each interviewer are shown in Chart 1.

Circulation of information that influences decision-making and PrEP use

The findings show that most information and experiences that influence the decision to use

PrEP come from peer social networks and are accessed via traditional "institutions" (i.e. health workers and health services). These "institutions" act as legitimate and legitimizing representatives of medical and scientific knowledge of HIV and social media influencers (many of whom are doctors).

Peer social networks were defined as groups of individuals who share a greater or lesser degree of social proximity and can be categorized as follows: those who have an affinity and share common interests and are part of the same social networks, without sexual intimacy (i.e. "friends"); those involved in a sexual-affective relationship, regardless of whether it is exclusive or long-lasting (i.e. "sexual-affective partners"); and those who interact to a specific end, such as the sharing of information, advice and experiences, often restricted to virtual environments (i.e. "support networks").

Fernando's and Júlio's accounts illustrate the flow of information between friends, revealing the effects this exchange can have on the decision to use PrEP:

[...] later some friends started using [PrEP] [...] So then he [a friend] started using it, told me, so I think there's a lot of word-of-mouth through friends too, the community [...] (Fernando).

So my friend who was taking part in the Combine study said: "Ah, we have some places. Do you want [to take part]?", so I said "Yes." It was like the best thing that happened (Júlio).

Unlike what happens in peer social networks, some interviewees completely hide PrEP use from their families for fear of stigma or discrimination, particularly when the family has conservative religious affiliations, as illustrated by Flávio: "I kind of hide [PrEP] from my mother, because of those issues, you know? She works in health and... she's also very religious". Hiding pill bottles in drawers or keeping tablets in backpacks are common strategies to hide PrEP use.

Apart from face-to-face interactions, the most predominant media of information circulation are interactions mediated (or facilitated) by online platforms (Facebook etc.) and dating apps. In these media, communication and support networks addressing topics of concern to the gay community, such as HIV, have assumed prominence and propelled the interactions between (potential) PrEP users and those curious about the treatment:

I: And how do you access this information? Through groups?

Chart 1. Sociodemographic characteristics of the study participants.

Fictitious name	Age (years)	City	Race/skin color*	Sexual orientation	Religion*	Education level*	Mean income*	Living situation*	Sex work	Marital status and relationship*	Type of PrEP	Duration of PrEP use*
Alexandre	33	Ribeirão Preto-SP	Black (black/brown)	Homosexual	Atheist/ Agnostic/ No religion	Incomplete higher education	>R\$ 1,000 to R\$ 3,000	Lives with friends	Never	Stable relationship (dating; married; etc.)	PrEP on-demand	Three to six months
Alvaro	44	Ribeirão Preto-SP	Black (black/brown)	Bisexual	Christian	Incomplete higher education	>R\$ 1,000 to R\$ 3,000	Lives alone	Never	Single	PrEP on-demand	Three to six months
Anderson	18	Fortaleza-CE	Black (black/brown)	Panssexual	Atheist/ Agnostic/ No religion	Incomplete secondary education	No income	Lives with family members	Never	Single	PrEP on-demand	Three to six months
André	30	São Paulo-SP	White	Gay	Atheist/ Agnostic/ No religion	Incomplete higher education	>R\$ 3,000	Lives with friends	Never	Single	Daily PrEP	One to two years
Angelo	45	São Paulo-SP	Yellow	Bisexual	Christian	Higher education	>R\$ 3,000	Lives alone	Never	Single	Daily PrEP	Three to six months
Augusto	28	São Paulo-SP	White	Gay	Atheist/ Agnostic/ No religion	Higher education	>R\$ 3,000	Lives with family members	Never	Single	Daily PrEP	One to two years
Charles	36	São Paulo-SP	Black (black/brown)	MSM	Christian	Higher education	>R\$ 3,000	Lives with partner	Never	Open relationship	Daily PrEP	One to two years
Danilo	22	São Paulo-SP	White	Homosexual	Atheist/ Agnostic/ No religion	Incomplete higher education	Receives help from third party	Lives with family members	Never	Single	PrEP on-demand	Up to three months
Douglas	26	São Paulo-SP	White	Bisexual	Umbanda/ Candomblé	Incomplete higher education	>R\$ 3,000	Lives with family members	Never	Single	Daily PrEP	Between six months and one year
Edson	40	Porto Alegre-RS	Black (black/brown)	Homosexual	Atheist/ Agnostic/ No religion	Higher education	>R\$ 1,000 to R\$ 3,000	Lives with partner	Never	Open relationship	PrEP on-demand	Between six months and one year

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Fictitious name	Age (years)	City	Race/skin color*	Sexual orientation	Religion*	Education level*	Mean income*	Living situation*	Sex work	Marital status and relationship*	Type of PrEP	Duration of PrEP use*
Edmilson	38	São Paulo-SP	White	Gay	Umbanda/Candomblé	Higher education	>R\$ 1,000 to R\$ 3,000	Lives with family members	Never	Single	Daily PrEP	One to two years
Elvis	46	São Paulo-SP	White	Gay	Atheist/Agnostic/No religion	Higher education	>R\$ 3,000	Lives alone	Never	Single	Daily PrEP	Between six months and one year
Everton	24	São Paulo-SP	Black (black/brown)	Gay	Atheist/Agnostic/No religion	Higher education	>R\$ 3,000	Lives with family members	Never	Single	Daily PrEP	Between six months and one year
Fábio	21	São Paulo-SP	Black (black/brown)	Bisexual	Christian	Incomplete higher education	>R\$ 1,000 to R\$ 3,000	Lives with friends	Never	Single	PrEP on-demand	Up to three months
Fabrcio	23	São Paulo-SP	White	Gay/Bi/Pansexual	Christian	Secondary education	>R\$ 1,000 to R\$ 3,000	Lives with friends	Yes	Single	PrEP on-demand	Between six months and one year
Fernando	30	Ribeirão Preto-SP	White	Homosexual	Atheist/Agnostic/No religion	Higher education	>R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Up to three months
Ferdinando	30	São Paulo-SP	White	Gay	Atheist/Agnostic/No religion	Higher education	>R\$ 1,000 to R\$ 3,000	Lives with friends	Never	Single	Daily PrEP	Between six months and one year
Flavio	28	Fortaleza-CE	Black (black/brown)	Homosexual	Atheist/Agnostic/No religion	Incomplete higher education	Receives help from third party	Lives with family members	Never	Single	PrEP on-demand	Three to six months
Heitor	32	São Paulo-SP	Black (black/brown)	Homosexual	Christian	Higher education	>R\$ 3,000	Lives alone	Never	Single	PrEP on-demand	Between six months and one year
Hélio	26	São Paulo-SP	Black (black/brown)	Gay	Christian	Incomplete higher education	>R\$ 3,000	Lives alone	Never	Single	Daily PrEP	One to two years

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Chart 1. Sociodemographic characteristics of the study participants.

Fictitious name	Age (years)	City	Race/skin color*	Sexual orientation	Religion*	Education level*	Mean income*	Living situation*	Sex work	Marital status and relationship*	Type of PrEP	Duration of PrEP use*
Henrique	27	São Paulo-SP	White	Homosexual	Christian	Higher education	>R\$ 1,000 to R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Between six months and one year
Ícaro	29	São Paulo-SP	Indigenous	Homosexual	Shamanic	Secondary education	Information not available	Lives alone	Never	Single	PrEP on-demand	Up to three months
Icaro	29	São Paulo-SP	White	Non-binary	Atheist/ Agnostic/ No religion	Incomplete higher education	Information not available	Lives with friends	Information not available	Single	Daily PrEP	One to two years
Igor	26	São Paulo-SP	Black (black/brown)	Homosexual	Atheist/ Agnostic/ No religion	Incomplete higher education	>R\$ 3,000	Lives with friends	Never	Stable relationship (dating; married; etc.)	PrEP on-demand	Up to three months
Ismael	33	Fortaleza-CE	White	Homosexual	Atheist/ Agnostic/ No religion	Incomplete higher education	Variable	Lives alone	Never	Stable relationship (dating; married; etc.)	PrEP on-demand	One to two years
Jean	41	Porto Alegre-RS	White	Homosexual	Christian	Higher education	> R\$ 3,000	Lives alone	Never	Single	PrEP on-demand	One to two years
João	24	Fortaleza-CE	Black (black/brown)	Homosexual	Christian	Incomplete higher education	>R\$ 1,000 to R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Three to six months
João Carlos	44	Fortaleza-CE	Black (black/brown)	Homosexual	Atheist/ Agnostic/ No religion	Higher education	>R\$ 3,000	Lives alone	Never	Open relationship	PrEP on-demand	Up to three months
José	56	Porto Alegre-RS	White	Homosexual	Christian	Higher education	No income	Lives alone	Never	Single	PrEP on-demand	Between six months and one year
Juliano	28	São Paulo-SP	White	Homosexual	Christian	Higher education	>R\$ 1,000 to R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Up to three months

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Chart 1. Sociodemographic characteristics of the study participants.

Fictitious name	Age (years)	City	Race/skin color*	Sexual orientation	Religion*	Education level*	Mean income*	Living situation*	Sex work	Marital status and relationship*	Type of PrEP	Duration of PrEP use*
Júlio Gomes	24	São Paulo-SP	White	Homosexual	Christian	Incomplete higher education	>R\$ 1,000 to R\$ 3,000	Lives with friends	Never	Single	PrEP on-demand	Three to six months
Kevin	23	São Paulo-SP	White	Bisexual*	Christian	Secondary education	>R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Between six months and one year
Leandro	26	Fortaleza-CE	White	Homosexual	Atheist/ Agnostic/ No religion	Incomplete higher education	>R\$ 1,000 to R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Between six months and one year
Leonardo	27	São Paulo-SP	White	Gay	Atheist/ Agnostic/ No religion	Higher education	>R\$ 3,000	Lives with friends	Never	Single	Daily PrEP	Between six months and one year
Leoni	26	São Paulo-SP	White	Gay	Atheist/ Agnostic/ No religion	Higher education	>R\$ 1,000 to R\$ 3,000	Lives with friends	Never	Stable relationship (dating; married; etc.)	Daily PrEP	Between six months and one year
Luan	28	São Paulo-SP	Black (black/brown)	Homosexual	Atheist/ Agnostic/ No religion	Higher education	>R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Up to three months
Luciano	32	Porto Alegre-RS	White	Homosexual	Atheist/ Agnostic/ No religion	Higher education	>R\$ 3,000	Lives alone	Never	Single	PrEP on-demand	Between six months and one year
Luis	32	Porto Alegre-RS	Black (black/brown)	Homosexual	Umbanda/ Candomblé	Secondary education	<R\$1,000	Lives alone	Never	Open relationship	PrEP on-demand	Up to three months
Matheus	49	São Paulo-SP	White	Gay	Umbanda/ Candomblé	Secondary education	>R\$ 3,000	Lives alone	Never	Single	Daily PrEP	One to two years
Murilo	23	São Paulo-SP	Black (black/brown)	Bisexual	Umbanda/ Candomblé	Incomplete higher education	>R\$ 1,000 to R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Between six months and one year

it continues

Chart 1. Sociodemographic characteristics of the study participants.

Fictitious name	Age (years)	City	Race/skin color*	Sexual orientation	Religion*	Education level*	Mean income*	Living situation*	Sex work	Marital status and relationship*	Type of PrEP	Duration of PrEP use*
Pedro	37	São Paulo-SP	Black (black/brown)	Gay	Atheist/ Agnostic/ No religion	Higher education	>R\$ 3,000	Lives alone	Never	Single	Daily PrEP	Between six months and one year
Renato	32	Porto Alegre-RS	White	Homosexual	Atheist/ Agnostic/ No religion	Higher education	>R\$ 3,000	Lives with friends	Never	Single	PrEP on-demand	One to two years
Ronildo	24	São Paulo-SP	Black (black/brown)	MSM	Umbanda/ Candomblé	Higher education	>R\$ 3,000	Lives with friends	Yes	Single	Daily PrEP	One to two years
Samuel	32	Curitiba-PR	White	Homosexual	Christian	Higher education	No income	Lives alone	Never	Single	PrEP on-demand	Up to three months
Tomás	35	São Paulo-SP	White	Gay	Christian	Higher education	>R\$ 3,000	Lives with partner	Never	Single	Daily PrEP	Between six months and one year
Victor	42	Ribeirão Preto-SP	White	Homosexual	Christian	Incomplete higher education	>R\$ 3,000	Lives alone	Never	Open relationship	PrEP on-demand	Up to three months
William	21	São Paulo-SP	Black (black/brown)	Homosexual	Atheist/ Agnostic/ No religion	Secondary education	>R\$ 1,000 to R\$ 3,000	Lives with family members	Never	Single	PrEP on-demand	Up to three months
Yuri	26	São Paulo-SP	White	Gay	Atheist/ Agnostic/ No religion	Secondary education	>R\$ 3,000	Lives with family members	Never	Stable relationship (dating; married; etc.)	Daily PrEP	One to two years

*Variable recategorized from the original responses.

Source: data obtained from the semi-structured interviews.

D: It's a Facebook group... you know, called the PrEP Forum [...] Members talk about their experiences... and people also discuss the studies that come out, you know? (Douglas).

[...] Because on Grindr, for example, there's a place where, after you've done the last test, it tells you, every now and again, it sends a notification about PrEP... On Hornet, there was a boy I really wanted to get to know, because I only look at his stuff ... he's always posting, he's like kind of the app ambassador. So in apps, evidently gay apps, you know? Hetero apps don't have that sort of thing, but gay apps in particular have a lot of campaign stuff (Fabrício).

Our results reveal the limited presence of traditional health institutions – i.e. health services, government bodies, etc. – in the dissemination of PrEP content. Only seven of the 48 interviewees learned about the existence of PrEP in health services, only after repeated use of post-exposure prophylaxis (PEP) or after reporting high-risk practices during post-test counseling. Only interviewees with a higher level of education and income had access to other formal sources of information, such as academic and scientific events and news articles.

In contrast, the overwhelming majority of interviewees accessed specialist information on PrEP and sexual health through social media influencers (many of whom were doctors) using Instagram, Twitter and YouTube channels or even dating apps, acting as “ambassadors” hired by the apps (as mentioned by Fabrício above):

I follow some profiles [...] LGBT people kind of worry more than heteros because there's a lot of stigma, you know? And I already knew a lot about following doctors' profiles, profiles... on social media, so I knew about PrEP and PEP, but I didn't have that much knowledge per se (Flávio).

I knew about PEP from information from... news, the internet and such. And I think information about prevention, and about medication, and other procedures is much more common for the community, you know, GLBTQ [...] We talk a lot more about it (Ismael).

PrEP promotion and its effects

In the sexual-affective partners group, PrEP was promoted mainly online, especially on dating apps. Sharing information on PrEP in these apps serves at least two purposes. The first is information provided by apps, such as the link to

the “what is PrEP” page on Grindr. Fabrício's and Luan's comments below illustrate the role played by apps and the circulation of information on PrEP:

I: ...partners, do you tell them you're taking PrEP?

L: Oh no, but it's pretty obvious, you know? First, it's on my profile that I take PrEP, so people already like it, and... and then when I talk about it people don't really understand what it is, so I play the community health worker, and explain what it is... (Luan).

The second is to choose sexual partners on dating apps. Some interviewees reported that they limited their “relationships to people who also use PrEP” (Flávio) as a way of increasing protection against HIV.

The accounts below sum up the findings regarding the receptivity of potential affective-sexual partners to the promotion of PrEP on dating apps. Our findings show that promoting PrEP can provoke positive reactions, from those who associate PrEP use with self-care, and negative reactions, due to its association with promiscuity, intentions of having unprotected sex and risk of sexually transmitted diseases. The sexual stigmas associated with homosexuality found in the accounts reveal a certain tension between the recognition of PrEP as an HIV prevention method and the idea that its use leads to a potential increase in risk behaviors:

Some... judged me, thinking that I... was taking it so I could have sex without a condom. And others thought... cool, because it's something you should... they think everyone... should take it (Augusto).

I think there's a stigma surrounding people who use PrEP, that they only have sex without a condom, they're barebackers... have a rampant sex life, are really easy, and don't protect themselves and don't use condoms anymore. That's not right quite, you know? Just because you use PrEP doesn't mean your life is a mess or you have a crazy sex life (Leandro).

Some interviewees, such as Luan, actively promoted PrEP to people outside their peer groups (friends), including family members.

Yes, I was very clear and straight up with everyone I knew. ...mother, I told my aunt. I wanted to make it very clear that it [PrEP use] was natural, how important it was, and how it shouldn't be used just by people who have specific practices; everyone should have access (Luan).

Experiences with PrEP: peer network support and engaging new users

Most interviewees said that after starting to use PrEP they actively engaged in sharing information and experiences about prophylaxis with peer networks and tried to “recruit” new users among friends with similar sexual behavior (“playing the community health worker”). Willian’s and Pedro’s accounts below illustrate this commitment to sharing information to convince friends to use PrEP. They also reveal that many interviewees believe that information related to HIV prevention and PrEP is not very widely disseminated among heterosexuals:

So we always say, especially when I started taking PrEP, “Hey guys, I started taking PrEP, so go for it too. [...] I work with heterosexuals and they were amazed that there is a drug against HIV. I think it’s because, socially speaking, it’s still an infection associated with homosexuals, you know?” (Willian).

I talk about my experience and say what I felt [when I started using PrEP]: “Look, there aren’t many side effects. You go to the clinic, say you want to take PrEP, they assess you, do some routine tests to see if your organism is compatible...” So I do it to give advice, so that more people can protect themselves (Pedro).

Discussion

Our findings show that face-to-face and online MSM social networks are key spaces for disseminating and sharing information on sexual health, HIV prevention and PrEP. There is strong evidence^{15,19-23} showing the social support role played by peers and the association between this support and an increase in knowledge of PrEP and take up, a reduction in stigma, discrimination and HIV risk behaviors, and increased reach of PrEP in populations with lower coverage by typical clinical and public health strategies.

Our findings suggest that traditional health institutions and communication strategies play a limited role in disseminating information about PrEP and democratizing access to new HIV prevention technologies. The conservative shift in Brazilian politics witnessed in recent years has resulted in cuts in spending on health education campaigns targeting vulnerable groups and an increased focus on moralistic initiatives²⁴. Only one of the 48 interviewees found out about PrEP through publicity strategies implemented by health institutions and seven received informa-

tion from specialist health services when they began PrEP. In addition, there was no mention of government social media campaigns addressing sexual health and HIV prevention, corroborating the findings in the literature²⁵.

The findings show that social media influencers are more engaged in sharing and disseminating information than traditional institutions. Indeed, HIV prevention content on social media has drawn increasing interest from researchers precisely because of the power this medium has to reach a wide range of different population groups^{13,25,26}. However, it is not clear whether the considerable increase in the content shared by peers, in other words, people who do not formally represent traditional health institutions, is a direct effect of government neglect of this problem and general dismantling of health policies or a result of mass migration to virtual media in increasingly well-organized hyperconnected networks²⁷. We believe that this phenomenon is a result of the combination of both factors.

Unlike a study²² that characterized perceived social support for young MSM in the United States where family members were the most common PrEP-specific support figures^{19,20}, our findings reveal that support was received in networks from outside the family, especially friends and sexual-affective partners. In societies characterized by discrimination and violence against sexual and gender minorities such as Brazil, the risk of parental rejection and increased likelihood of victimization due to the stigma of homosexuality and AIDS tend to negatively affect willingness to disclose the use of biomedical HIV prevention methods. Not coming out as homosexual or disclosing sexual orientation/identity is often used as a protection strategy by sexual minorities^{21,28}. This could explain the hiding of PrEP use from family members observed in the present study, primarily when family members are affiliated to conservative religions that are traditionally against sexualities that deviate from hetero-cis-normativity²⁹.

It is worth mentioning the impact of sharing information on sexual health, more specifically PrEP usage, on online dating platforms and apps. These interactions enable the maintenance of existing social networks for gays and the creation of new spaces for sharing knowledge and experiences. Within this context, social media influencers were cited as key reliable sources that motivated people to seek out prophylaxis or facilitated access due to the advice they provided on how and where to get PrEP. Previous studies^{13,15}

have highlighted the importance and increasing impact of online HIV control and prevention strategies focusing on opinion leaders, strengthening support networks and group or individual interventions (word-of-mouth).

There are three possible reasons for the active engagement of most participants in promoting PrEP and “winning over” new users among friends and potential sexual-affective partners on online dating platforms and apps: 1 - To increase community protection against HIV by promoting PrEP among closer friends and acquaintances at risk of infection; 2 - As a self-protection strategy against the stigma of AIDS resulting from sexual stigma; 3 - Potential erotic capital gains³⁰ and *fuckability*³¹ in the face of potential sexual partners, especially on dating apps.

Previous studies have described the engagement of gay men in promoting community well-being and the sexual health of peers by encouraging STI and HIV testing and PrEP use through social media³². Our findings were similar to those of a study in Guatemala³³ showing that participants shared information and educated friends and potential sexual partners about sexual health and PrEP, both face-to-face and online. Another study³⁴ showed that MSM shared the understanding that the dissemination of PrEP reduces the collective risk of HIV acquisition.

Studies with men from sexual minorities show that promoting PrEP can have often differing and contradictory effects. On the one hand, studies^{35,36} have reported PrEP-related stigmas, such as the belief that PrEP users are promiscuous and engage in high-risk sexual behavior, judgment from medical providers and the assumption that PrEP users are HIV-positive. In contrast, and corroborating our findings, other studies³⁴ have found that users disclose PrEP use as a strategy to distance themselves from sexual stigma and the stigma of AIDS. In other words, for certain individuals who according to intersectionality theory are situated on the axes of oppression (ethnic minorities, LGBT, etc.), promoting PrEP can empower them to cope with sexual stigmas and the stigma of AIDS³⁷.

Other reasons that explain the promotion of PrEP use on dating apps and only having sex with other prophylaxis users are potential erotic capital gains and *fuckability*. Both are situated within the hierarchical system of desirability and sexual attractiveness and modulated by ethical, aesthetic and political ideals of heteronormativity intersected with other matrixes of oppression (racism, ableism, homophobia, ageism, etc.)^{30,31}.

PrEP use has been associated with major gains among gays and MSM related to sexual activity, such as increased sexual agency, improved sexual self-esteem, enhanced perception of pleasure, diminished anxiety, reduction in fear of HIV, reduced stigma and shame of practicing anal sex without a condom, and lessened pain during anal sex due to the relief felt from using prophylaxis^{38,39}.

The idea of *fuckability* proposed by feminist Amia Srinivasan³¹ is useful for understanding the decision to disclose PrEP usage on dating apps. According to Srinivasan, *fuckability* expresses and qualifies individuals who have widely desirable attributes and the potential to confer status on those who have sex with them (fit bodies, white, hairless, western, etc.). In an environment in which the exchange of messages between app users is governed by the pursuit of immediate sexual pleasure, the promotion of PrEP can confer increased erotic capital and improve the chances of having sex with people with a “high *fuckability* factor”. Studies with MSM investigating PrEP use and the impact of sexual behavior reveal that the pursuit of sexual fulfillment is not limited to abandoning condom use (due to erection problems and reduced sensitivity), but also includes the ability to choose the most satisfying position for penetration (insertive, receptive or both) and the adoption of other practices, such as cum play, without worrying about the risk of HIV infection^{38,40}. In short, disclosing PrEP use on dating apps may appeal to those interested in more risky and more pleasurable sex.

Our findings revealed positive and negative reactions to the use of prophylaxis by the participants. Positive reactions were related to aspects such as responsibility, HIV-related self-care and sexual health in general, consequently breaking with negative sexual stereotypes associated with homosexuality. These findings corroborate the results of other studies^{32,38,41}. In contrast, negative reactions emerged from the association made between PrEP and promiscuity, perversion, lack of self-care and increased risky sexual behavior. The context in which the participant disclosed PrEP and the level of intimacy of the relationship were essential factors in determining whether reactions were negative or positive. Friends, sexual-affective partners and family members, for example, tended to manifest a positive reaction, while negative reactions tended to be manifested by family members affiliated to Christian religions and, to a lesser extent, the potential sexual-affective partners of participants who showed

interest in sex without a condom on dating apps.

Other studies that explored the experiences and effects of using prophylaxis and disclosing PrEP usage also identified the idea that the use of prophylaxis is associated with high-risk sexual behaviors, promiscuity, and mixing sex with drugs. The literature also highlighted judgment of PrEP users by medical providers, stigma from family members, and the assumption that PrEP users are HIV-positive. This range of discriminatory practices was also reported among MSM and prophylaxis users themselves^{34-36,42,43}.

Conclusion

Peer social networks play an essential role in sharing experiences and information that may influence the decision to use PrEP and in engaging new users. However, our findings show potentialities and tensions that warrant highlighting. Potentialities include the diversification of PrEP users and democratization of PrEP coverage in the country through the creation and strengthening of social networks of gays and other MSM. Tensions include the wide range of social representations of PrEP as an ARV-based HIV prevention method. Some interviewees reported negative reactions to PrEP use, especially on dating apps, while others mentioned positive perceptions of PrEP use associated with self-care for example. These findings suggest conflicting social representations of PrEP, the maintenance of stereotypes of homosexual sexuality, especially those related to notions of (self-)care, and the reification of stigmas surrounding sex and AIDS in this population group.

This study has some limitations. First, the interviewees were PrEP users undergoing regular follow-up, limiting our analysis to people with better take up who are more used to the treatment and likely to have a favorable view of the meth-

od. Second, the users who decided to participate in the study may have felt more comfortable in promoting PrEP use than those who refused to participate. Finally, some of the participants who were interviewed online due to the COVID-19 pandemic may have felt inhibited about talking about certain matters in the presence of affective-sexual partners or family members.

Despite these limitations, this study has a number of strengths and innovations. First, participants had been using PrEP for different lengths of time, ranging from less than six months to more than two years. The diversity of the sample therefore provides insights into the reasons behind and contexts involved in the promotion of PrEP among people who had recently initiated prophylaxis and those who had been taking PrEP for longer periods and increases the sensitivity of our analysis to possible changes in social representations of prophylaxis over time. Second, the sample included participants using daily PrEP, available free of charge in Brazil since 2018, and on-demand PrEP, whose use is still restricted to demonstrative studies. Third, our sample included PrEP users from five large cities from three of the country's geographical regions undergoing follow-up in different types of health services.

Finally, further research is needed to cast light on the different interpersonal dynamics, tensions and crosscutting factors involved in interactions on dating apps and online platforms related to the sharing of sexual health information and experiences, PrEP promotion and its effects using different approaches, such as focus groups and netnography. We also suggest that studies employing intersectional sensibility are conducted to gain a deeper insight into the configuration of different social networks to improve our knowledge of how systems of oppression operate to create axes of privilege and/or social disadvantage along the continuum of PrEP care.

Collaborations

LA Santos structured the conception and design of the article, produced the first data analysis, and led the writing, final review, and submission of the manuscript. MT Couto collaborated on the design, writing of the final version, and final review of the manuscript. A Grangeiro collaborated on the design, writing of the final version, and final review of the manuscript.

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